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ABSTRACT

This paper describes a follow-up study that was made to assess the accuracy of Delphi forecasts produced as part of a 1970 study on changes in the organizational structure of large school districts. The 1970 study examined the organizational models of 82 of the largest U.S. school districts, based on data gathered from superintendents of the districts and from chief state school officers. As part of that study, the Delphi technique was used to project organizational changes that were expected to occur in the study districts by 1974. The follow-up study surveyed the superintendents of the 82 study districts to learn which, if any, of the predicted changes have occurred. Findings of the follow-up study show that all of the organizational changes forecast to occur by 1974 have occurred, and that no changes forecast to occur after 1978 have occurred. (Author/JG)

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A REVISITATION OF DELPHI FORECASTS: ORGANIZATIONAL CHANGES IN LARGE SCHOOL DISTRICTS

John Andes and John J. Paterson

This article concerns the restudy of the organizational changes in a five-year period among the largest school systems in the United States. As part of a USOE sponsored research project, which was completed in 1971, data were collected concerning the organizational models used by 82 of the largest school districts in the United States.* All school systems enrolling 50,000 or more pupils were included in the study. The data collected in 1969 were used (1) to describe the type of organizational models existing in these districts, (2) to conceptualize, describe and develop alternative administrative structures for large metropolitan school systems, and (3) to project the organizational changes that were expected to occur in these districts by 1974. The Delphi technique was used as a basis for making the projections.

The Delphi technique has been used for approximately one decade, with the first published reports by the Rand Corporation in 1964. During the past decade it has been used by researchers and decision makers in public schools (Andes, 71), colleges, universities (Peterson, 1973), state (Helmer, 1969) and federal governments, businesses, and research bureaus (Gordon, 1964; Andes, 1972). It has been used to: (1) forecast societal and technological change (Schneider, 1972); (2) develop consensus on goals and objectives

*The orginal research was conducted by the University of Florida Department of Educational Administration under USOE Grant 080254-4461 "Changes in Organizational Structures of Large School Systems with Special Reference to Problems of Teacher Militancy and Organizational Conflict."

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(Cyphert, 1970; Peterson, 1973); (3) institutional planning and policy development (Peterson, 1974); (4) cost effectiveness and cost benefit (Quade, 1970); and (5) determining activities to attain desired objectives (Helmer, 1969).

The School District Organizational Patterns in 1969 and 1974

To provide the reader some understanding of the school districts, they are categorized by region and enrollment in Table I below. Many of the largest school systems in the United States are located in the South. This is accounted for by the use of the county unit as the school district in several Southern States.

TABLE 1

Enrollment and Location of Large Urban School Systems - 1969

Enrollment	EAST	SOUTH	MIDWEST	WEST	TOTAL
50,000-75,000	2	21	11	10	44
75,000-100,000	3	5	1	5	14
100,000-200,000	1	9	5	2	17
200,000+	2	2	2	1	7
TOTAL	8	37	19	18	82

In 1969 two panels (chief state school officers and large school system superintendents) in a three step Delphi process forecast the major changes in organizational structure that they expected during the remainder of the twentieth century. One of the panels consisted of eighteen chief state school officers. The other panel consisted of the superintendents or their

appointed representative of twenty-five school systems enrolling 50,000 or more pupils. The superintendent's panel was also asked to describe the current organizational pattern of their school districts or the current organizational pattern of school districts in their state. They were also asked to provide organizational charts which were used for verification. On site research was conducted in nine representative districts which also verified the data.

In the 1969 study twelve types of organizations for school operation were described. These are shown graphically in Figure 1. Some of these models were projected for possible use but not operational in 1969. The potential models are the Coordinated Community Resources (CCR), Feeder School Decentralization, Community Control, Metropolitan Educational Service Agency (MESA), and State Regional Education Service Agency (RESA). The models found in use in large school systems in 1969 were Unified City or County, Unified City and County (metropolitan), State I, Regional Decentralization, and Instructional Service Decentralization.

Forecasts and Changes in Organizational Structure

The authors made a restudy of these school districts in 1974 to discover whether significant changes had occurred during the five-year period. What changes had occurred in the organizational structures of the school systems in the 1969 study? What were the directions of these changes? How accurate was the Delphi technique in anticipating these changes? The superintendents of the eighty-two large school systems were asked to:

(1) Describe their current organizational patterns

(2) Provide organizational charts

(3) Respond to the same twenty-seven field tested items stating potential organizational changes that were used in the 1969 study.

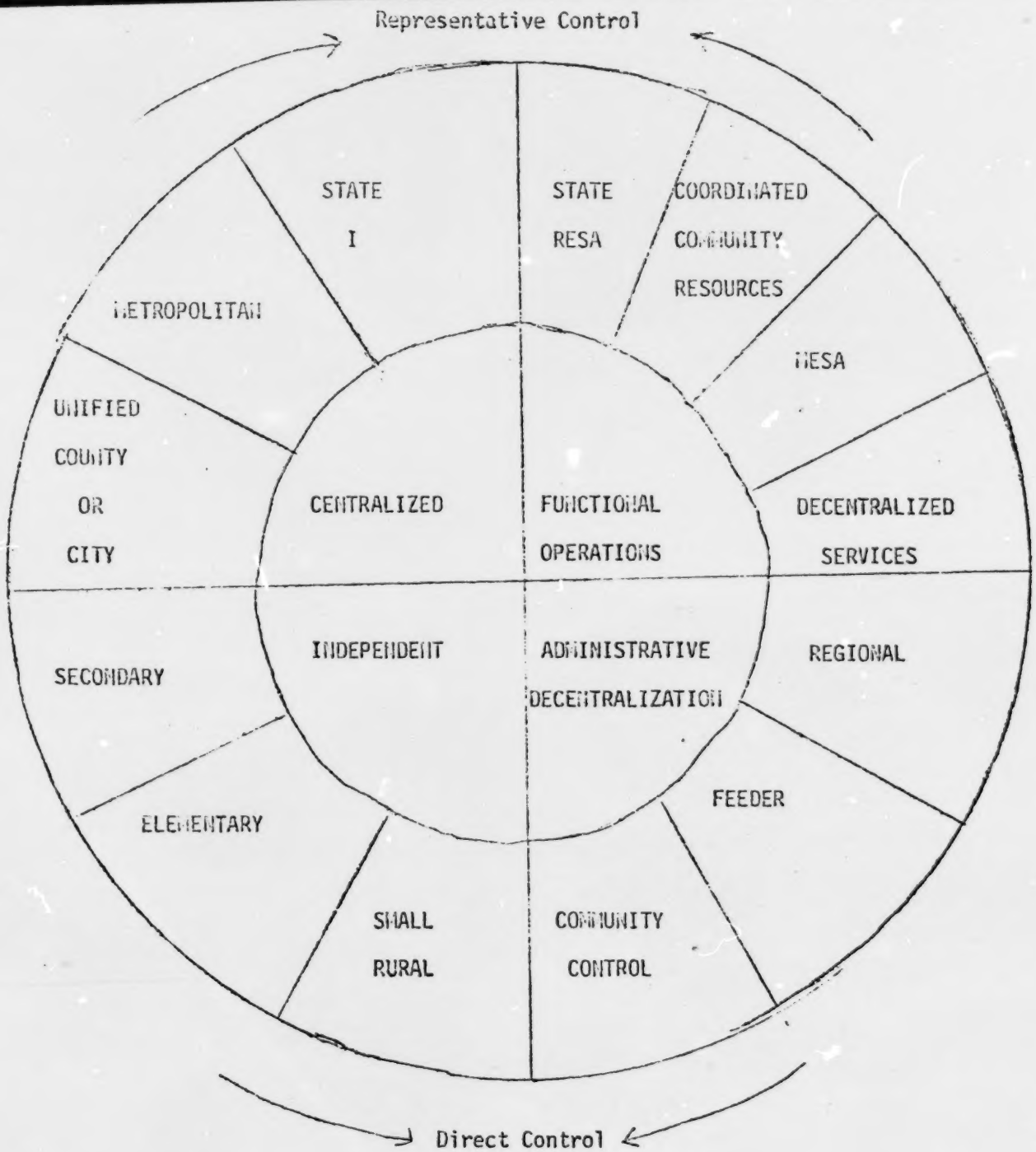

Figure 1. Type and control of bureaucratic models for school organization.*

*A detailed description of each of the models is presented in "Alternative Models for Urban School District Organization", Educational Administration Quarterly. Vol. VII, No. 1, Winter, 1970, pp. 64-86.

Current Organizational Patterns

Our restudy shows that there was significant change in the organizations of the 82 large school systems. Comparative data for the 1969 study and the 1974 restudy are shown in Table 2. Five different models of organization were in use in 1974, whereas only four were in use in 1969. Twenty of the school systems that operated under the unified type organizations (Unified City or County or Unified City and County) in 1969 had adopted decentralized organizations by 1974. Most of these school systems had adopted the Regional Decentralization Model--the number using this model more than doubled. Two of the school districts had adopted the Feeder School Decentralization Model, which was not in use in 1969.

TABLE 2

Organizational Pattern of Large School Systems*

	Unified	State	Decentralized Services	Decentralized Region	Decentralized Feeder
1969	62	1	4	15	0
1974	42	1	5	32	2

*Based on Superintendents Description and Organizational Charts

The superintendents of these school systems were not expecting as much change for the coming five-year period as had occurred during the 1969-74 period. This is supported by the fact that only fifteen superintendents were planning reorganization in 1974 as compared to the twenty-nine planning reorganizations in 1969.

Forecasts of Changes

The twenty-seven potential changes that the panels were asked to respond to in both the 1969 and the 1974 Delphi instrument were stated as follows:

1. Education will be administered by state governments with the concurrent elimination of the existing local school districts in at least five states.

2. Education in the metropolitan areas (within a state) will have a single taxing and financing district and multiple operating districts in at least five metropolitan areas.

3. Representatives elected by teacher organizations will serve as full members of local urban school boards in at least five urban school districts.

4. School districts will have a separate full-time division devoting itself to communications, coordination and cooperation with the community served by the school system in at least five urban school districts.

5. Administrative decentralization in at least five urban school districts will be through the technique of decentralizing to regional superintendents or by transferring additional administrative responsibility to school principals.

6. Community controlled educational districts of less than 10,000 pupils will be in operation in at least five metropolitan areas.

7. State and federal governments will supply the total school budget from non-local tax sources (elimination of local property tax) in at least five states.

8. Federal and state governments will supply the minimum operating budget for education, and local property taxes will supply additional funds for education (less than 25% of total budget) in at least five states.

9. Urban school districts will have two superintendents in at least five urban school districts. One will be responsible for the educational program and the other superintendent will be responsible for administration.

10. Health, educational, welfare and social and employment agencies of the metropolitan area will be combined into a single administrative organization in at least five metropolitan areas.

11. The judicial function of the school board will be eliminated and the function transferred to a separate board in at least five urban school districts.

12. Educational parks will be a typical pattern of school organization and decentralization in at least five urban school systems.

13. Local school advisory councils will function in at least five urban school districts in policy and program areas of decision-making.

14. Educational professionals (teachers and administrators) will recommend and the school board will elect urban superintendents only from their recommendations in at least five urban school systems.

15. The internal organizational structure of at least five urban school systems will be designed on the basis of PPBS.

16. Students in secondary schools will participate in policy and program areas of decision-making in at least five urban school systems at the system level.

17. Decentralization of administrative responsibility will be in regions composed of a high school and its feeder schools in at least five urban school systems.

18. Education will be financed by state governments with local school districts having educational and operational control.

19. At least five metropolitan areas will see the independent operating school districts unified into metropolitan educational districts serving urban, suburban, and fringe areas.

20. Teacher association organizations will, in at least five states, negotiate on the state level rather than on the local school district level for salaries and working conditions.

21. Medical, social, welfare, employment and recreational services will be provided at school site centers in at least five urban school systems.

22. At least five urban school systems will be organized to provide metropolitan tax base and small operating school districts thereby gaining the advantages of the large system and the advantages of the small system.

23. Decentralization in at least five urban school systems will be service and curriculum decentralization without concurrent administrative decentralization.

24. Decentralization districts in at least five urban school systems will have boards with legal (rather than advisory) authority.

25. Most (51%) urban school systems will have an assistant to the superintendent who will have no line duties but will function as a by-pass person for members of the school system and of the community to gain information and success.

26. The role of the system superintendent will become that of an administrator and implementor rather than the chief educational or curriculum leader in at least five urban school districts.

27. School districts will have a separate full-time division devoting itself to communication, coordination and information system within the district in at least five urban school districts.

Five-year periods were used by the two panels in making the forecasts. The final results of the first Delphi (three stages) study conducted in 1969 are shown in the first columns of Table 3. The 1974 questionnaire requested the superintendents of the 82 large school systems if the potential change, as listed in 1969, currently exist in their district and, if not, when they expect to see the potential change occur in at least five large school systems in the United States. Sixty-five responses were received, including six that were unable to supply useable data. This left a useable response of 59, representing over 72 percent of the school systems in the population. These 59 school systems were located in 35 states and in every region of the United States. The results of the 1974 follow-up are shown in the last four columns of Table 3. Twelve of the twenty-seven potential changes, as stated in 1969, had already occurred. Seven were expected by the chief state school offices to occur by 1974, and six were expected to occur by 1974 by the superintendents of the large school system (see Table 3). All of these potential changes, which were actually realized by 1974, were expected to occur no later than 1978 by the two Delphi Panels used in 1969.

TABLE 3

Comparison: Delphi Forecasts and Occurrences

	1969 Delphi Forecasts				1974 Findings and Forecasts			
	Chief State School Officers Panel		Large District Superintendents Panel		Large District Superintendents (59 of 82)			
Delphi Item	Interquartile Range	Median	Interquartile Range	Median	Currently Exists in My District Yes	No	Forecasts Interquartile Range	Median
1	1982-87	1983	1877-89	1980	1	58	1987-N*	Later
2	1975-79	1978	1975-89	1978	4	55	1982-L*	1988
3	1975-84	1980	1978-89	1983	3	56	1984-L	1989
4	1970-77	1973	1971-79	1975	30	29	HAS OCCURRED	
5	1970-74	1972	1971-74	1973	30	29	HAS OCCURRED	
6	1975-84	1980	1975-84	1978	3	56	1978-1989	1984
7	k975-84	1980	1977-87	1983	2	57	1979-1989	1988
8	1971-78	1978	1971-79	1978	11	48	HAS OCCURRED	
9	1973-87	1980	1980-N	Never	4	55	1977-N	Later
10	1980-89	1984	1982-L	1988	4	55	1978-N	Later
11	1980-89	1986	1982-L	Later	2	57	1980-N	Later
12	1975-84	1979	1975-84	1978	2	57	1978-L	1988
13	1972-78	1977	1970-74	1972	38	21	HAS OCCURRED	
14	1972-87	1978	1980-89	1983	3	56	1986-N	1989
15	1972-79	1974	1971-78	1975	18	39	HAS OCCURRED	
16	1971-78	1974	1971-74	1973	25	34	HAS OCCURRED	
17	1971-78	1974	1971-74	1973	13	46	HAS OCCURRED	
18	1978-89	1979	1980-89	1983	2	57	1982-L	1987
19	1972-79	1977	1975-79	1976	13	46	HAS OCCURRED	
20	1975-79	1977	1975-79	1978	4	55	1981-1988	1982
21	1972-79	1977	1973-79	1976	10	49	HAS OCCURRED	
22	1975-79	1977	1975-79	1978	2	56	1980-1989	1983
23	1975-79	1978	1975-79	1978	4	48	1978-1984	1982
24	1975-L	1984	1975-78	1980	3	54	1982-L	1986
25	1975-79	1977	1975-79	1978	16	43	HAS OCCURRED	
26	1971-76	1972	1971-77	1974	18	41	HAS OCCURRED	
27	1971-76	1973	1971-79	1973	28	31	HAS OCCURRED	

*N=Never
L=Later

TABLE 4

Accuracy of Delphi Forecasts

Has Occurred by 1974	Predicted to Occur (Median)	
	Chief State School Offices	Large District Superintendent
Delphi Item		
4 - Community Communication	1973	1975
5 - Regional Decentralization	1972	1973
8 - State and Federal Support	1978	1978
13 - School Advisory Councils	1977	1972
15 - PPBS Structure	1974	1975
16 - Student Particpation	1974	1973
17 - Feeder Decentralization	1974	1973
19 - Service Districts	1977	1976
21 - Social Welfare Services	1977	1976
25 - Community Information	1977	1978
26 - Superintendent: Administrator	1972	1974
27 - Community Communication	1973	1973

Synopsis of Major Forecasts

The twelve items represent four types of modifications of the large school district organization: (1) Community Relations; (2) Decentralization; (3) Fiscal Affairs; and (4) Unification. The specific changes in these areas will be discussed in the following paragraphs.

Community Relations

The potential changes used in the Delphi technique in 1969 become the

focus of our elaboration upon the changes in school organizations above 50,000 pupils enrolled. Items 4, 13, 16, 21, 25 and 27 describe changes in the organizational structure regarding the relation of the school system to the community in which it operates schools. In 1969 the panels forecast that school districts would add a specific administrator or a specific organizational department fo facilitate communication between the school system and the environment it serves. This has occurred in a majority of the large school systems responding in the 1974 study. The communication is to be two-way, and a study of the organizational charts of these systems reveals that most of these administrators or units have direct access to the superintendent.

Closely related to openness is service. Ten large school systems indicated that they have gone beyond providing educational services at school sites and provide recreational, social, medical, welfare and even employment services. These services are for adults as well as the traditional school age pupils.

The most frequently reported change in organizational structure of large school systems is the development of local advisory councils to function in policy and program areas of decision-making. Thirty-eight of the fifty-nine reporting school systems indicate that this has occurred. These councils have three organizational variations: (1) councils for a specific school; (2) councils for a regional or feeder subdistrict; and (3) councils for the central board of superintendent.

In twenty-five of the fifty-nine reporting large school systems, students participate in policy and program areas of decision-making. At the system level they serve (1) as regular or ex officio board members

(some are even paid), (2) as committee and task force members, and (3) as student advisory councils to central and regional boards. Students may be selected by their peers, the superintendent, or the board.

Decentralization

Administrative decentralization by regional or feeder school units was forecast to occur. The responses of the large school systems in 1974 indicate that this has occurred in a majority of the large school systems. Regional decentralization is the most frequent of the patterns, although in several districts the regions are so designed as to contain one to four feeder school networks. Fifteen systems are planning some type of reorganization in the near future, the most common being decentralization. This is approximately one-half the number who were planning decentralization during the original study in 1969. This may indicate that the rate of change is slowing. In 1969 none of the large school systems identified their organizational pattern as feeder decentralization in 1974.

A different type of decentralization is also occurring as superintendents indicate that they are becoming administrators and implementors rather than the chief educational or curriculum leaders in the school systems. The pressure and the time requirements of the environment and the organization are taking more of the superintendents' time, both day and night. Also, someone in the hierarchy is becoming responsible for the educational program. This type of administrative decentralization--that is, the role changes in the superintendency--has not been adequately researched. At least one system no longer requires the chief administrator to have public school classroom and administrative experience.

Fiscal Affairs

Program Planning and Budget Systems (PPBS) have been installed in eighteen large school systems. However, an examination of the organizational charts of these school systems indicates that no significant organizational changes have resulted from implementing PPBS.

Eleven large school systems reported that their minimum operating budget was supplies from state and federal services with less than twenty-five percent supplies from local sources. This occurred sooner than forecast. These eleven large school systems were located in nine states.

Unification

The development of metropolitan school districts was one of the areas studied in the 1969 Delphi forecast. This concept means the merger of several operating units. In the 1974 study thirteen school systems reported that the concept described their system. As the authors were unaware of that many mergers, further analysis was conducted. This analysis revealed that some county unit systems in the South reported that they were metropolitan school districts. They do meet the definition of serving urban, suburban and fringe areas of a metropolitan area, but with rare exceptions (Nashville-Davidson, Tennessee) are not the result of recent mergers. Other than this item no trend toward unification, merger, or consolidation was stated in the 1974 study.

Forecasts of Future Changes

In all fifteen items stating possible changes that have not occurred, a uniform pattern developed when the superintendents were asked to forecast when, if ever, the change would occur. Using the median, no additional changes were forecast for the 1970's and, except for one item, every 1974

forecast was later than the 1969 forecast. Care should be taken in interpreting the 1974 forecast since only one questionnaire was used rather than the three-step feedback process normally used in the Delphi process. The full Delphi process was not used as the authors were focusing on what changes had occurred during the 1969-1974 period.

Summary

The 1969-1974 period can be characterized as one of rapid and extensive change in the organizational structure of large school systems, especially in the areas of decentralization and community relations. The immediate future, 1975-1979, does not appear to be one of rapid or extensive change. Over three-fourths of the large school systems expect no significant change in their organizational structure.

The Delphi system of forecasting change showed considerable accuracy. All of the items forecast to occur during the 1969-1974 period have actually occurred. No item forecast to occur after 1978 has occurred. This indicates that the Delphi process in this study was accurate for a five-year period, although it may result in conservative forecasts of changes.

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